

# Individualised instruction has a positive effect on learners, although there is large variation across studies

Cost	Evidence strength	Impact (months)	Effect size
£££££		+3	0.19

#### What is it?

Individualised instruction involves different tasks for each learner and support at the individual level. It is based on the idea that all learners have different needs, and that therefore an approach that is personally tailored — particularly in terms of the activities that pupils undertake and the pace at which they progress through the curriculum — will be more effective. Various models of individualised instruction have been tried over the years in education, particularly in subjects like mathematics where pupils can have individual sets of activities which they complete, often largely independently. More recently, digital technologies have been employed to facilitate individual activities and feedback.

### How effective is it?

On average, individualised instruction has a positive effect on learners, although there is large variation across studies, with some showing small negative impacts.

For classroom-based approaches, it appears that the role of the teacher may become more managerial, with the increased requirements for organising and monitoring learning activities leaving less time for high quality pedagogical interaction. This may explain some of the variation in impact. Because of this, individualised instruction may be better used as a supplement to usual class teaching, rather than a standard replacement.

Evidence from the Arab World shows that individualized instruction is a promising strategy for meeting students' needs and improving their learning. Studies in Saudi Arabia, United Arab Emirates, Jordan, Algeria, and Oman reported that when teachers differentiated their instruction and designed learning tasks based on the individual students differences, their achievement, engagement in their learning, and self-confidence improved.

Researchers have highlighted some potential barriers for teachers to use individualized instruction as a teaching approach in their classroom. Examples include lack of teacher training, large classroom size, and lack of educational equipment and instruments are among the main obstacles.

To date, research in individualized instruction is limited in this region despite the few reported benefits. More research is needed in this area, especially to collect data regarding the reality of the perception and use of teachers of the differentiated teaching strategy. Furthermore, longitudinal studies are needed to investigate the long-term impact of online platforms used for individualized instruction on students motivation, engagement, and performance. More future research should be conducted over a larger sample size in order to validate the findings.

### *How secure is the evidence?*

There have been several meta-analyses which support the conclusion that individualising learning for whole classes can have moderate positive impacts. There is, however, some variation, with a number of meta-analyses showing smaller effects.

There is some research from other connected fields, such as computer-based learning, and Bloom's 'mastery learning', where students have instructions broken down into steps, receive feedback on their learning, and only move on when they have 'mastered' a particular step. In both fields, small group approaches appear to be more effective than individualised approaches.

The evidence is mostly drawn from secondary school studies and studies in mathematics, though there is also evidence from other curriculum subjects such as science, history and geography.

#### What are the costs?

The costs of implementing individualised learning are usually very low. Approaches using technology, such as online tutoring programmes or integrated learning systems, have become less expensive in recent years. Overall, costs are therefore estimated as very low.

As yet there is no information about local costs.

## What should I consider?

How will you ensure that there is sufficient time for direct teacher interaction with all pupils — individually and as a class — given the increased requirements on the teacher to organise and

monitor individual activities?

It may be that individualised instruction is only effective for pupils who are skilled in managing their own learning (see <u>Metacognition and self-regulation</u>). What are the implications of this for your pupils?

Using digital technology to deliver individualised learning activities can provide learners with effective practice, but learners also need direct instruction from a teacher when learning new content, or when they are not making progress.

Have you considered small group learning as a way to meet differing learner needs without reducing the total amount of teaching time that pupils receive?

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